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Search Results -

Term	Documents
1.CLM..USPT,PGPB,JPAB,EPAB,DWPI.	13
(L1.CLM.).USPT,PGPB,JPAB,EPAB,DWPI.	13

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

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Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L2	L1.clm.	13	L2
L1	(cd28) same (inhibit$ or block$ or prevent$ or treat$ or therap$) same ('t-cell$' or 't-lymphocyte' or b7$)	323	L1

END OF SEARCH HISTORY

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            $0.32    0.092 DialUnits File1
     $0.32  Estimated cost File1
     $0.32  Estimated cost this search
     $0.32  Estimated total session cost   0.092 DialUnits

File 410:Chronolog(R)  1981-2002/Jul
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      Set  Items  Description
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       03aug02 07:37:00 User208760 Session D2119.2
            $0.00    0.070 DialUnits File410
     $0.00  Estimated cost File410
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.35  Estimated total session cost   0.161 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File   5:Biosis Previews(R)  1969-2002/Jul W4
         (c) 2002 BIOSIS
*File   5: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File  73:EMBASE  1974-2002/Jul W4
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*File  73: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 155:MEDLINE(R)  1966-2002/Jul W4
*File 155: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 399:CA SEARCH(R)  1967-2002/UD=13705
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? e au=linsley peter ?

Ref   Items  Index-term
E1      156  AU=LINSLEY P.S.
E2       33  AU=LINSLEY PETER
E3        0 *AU=LINSLEY PETER ?
E4      139  AU=LINSLEY PETER S
E5        1  AU=LINSLEY R F
E6        2  AU=LINSLEY R K
E7       18  AU=LINSLEY R M
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E9        1  AU=LINSLEY R.M.
E10       1  AU=LINSLEY W
E11       3  AU=LINSLEY W S
E12       1  AU=LINSLEY W.S.

          Enter P or PAGE for more
? s e1-e4
             156  AU=LINSLEY P.S.
              33  AU=LINSLEY PETER
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             139  AU=LINSLEY PETER S
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      S1     328  E1-E4
? s s1 and b7?
             328  S1
           20254  B7?
      S2     188  S1 AND B7?
? rd s2
...examined 50 records  (50)
...examined 50 records  (100)
...examined 50 records  (150)
...completed examining records
      S3     123  RD S2 (unique items)
? s b7?
      S4   20254  B7?
? s b7?(20n)(t-cell? or t-lymphocyt? or cd28 or ctla?)
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   GENE (HOMINIDA
           20254  B7?
           37395  T-CELL?
          149088  T-LYMPHOCYT?
           13272  CD28
            5827  CTLA?
      S5    4111  B7?(20N)(T-CELL? OR T-LYMPHOCYT? OR CD28 OR CTLA?)
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? s s5 and py<1992
Processing
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        30482428  PY<1992
      S6      53  S5 AND PY<1992
? rd s6
...examined 50 records  (50)
...completed examining records
      S7      27  RD S6 (unique items)
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 7/7/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
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07906307   BIOSIS NO.: 000093005430
CD28 DELIVERS A COSTIMULATORY SIGNAL INVOLVED IN ANTIGEN-SPECIFIC IL-2
  PRODUCTION BY HUMAN T CELLS
AUTHOR: JENKINS M K; TAYLOR P S; NORTON S D; URDAHL K B
AUTHOR ADDRESS: DEP. MICROBIOLOGY, UNIVERSITY MINNESOTA MEDICAL SCHOOL, BOX
  196 UMHC, 420 DELAWARE ST. S.E., MINNEAPOLIS, MINN. 55455.
JOURNAL: J IMMUNOL 147 (8). 1991. 2461-2466. 1991
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: CD4+ T cells require two signals to produce maximal amounts of
  IL-2, i.e., TCR occupancy and an unidentified APC-derived costimulus.
  Here we show that this costimulatory signal can be delivered by the T
  cell molecule CD28. An agonistic anti-CD28 mAb, but not IL-1 and/or IL-6,
  stimulated T cell proliferation by tetanus toxoid-specific T cells
  cultured with Ag-pulsed, costimulation-deficient APC. Furthermore, the
  ability of B cell tumor lines to provide costimulatory signals to
  purified T cells correlated well with expression of the CD28 ligand
  B7/BB-1. Finally, like anti-CD28 mAb, autologous huan APC
  appeared to stimulate a cyclosporine A-resistant pathway of T cells
  activation. Togehter, these results suggest that the two signals required
  for IL-2 production by CD4+ T celsl can be transduced by the TCR and
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CD28.

7/7/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07900302 BIOSIS NO.: 000041129146
LIGATION OF THE **CD28** RECEPTOR BY ANTIBODY AND **B7**-BB1 INDUCES TYROSINE PHOSPHORYLATION IN HUMAN T CELLS
AUTHOR: VANDENBERGHE P; FLETCHER M C; LEDBETTER J A; NADLER L M; FREEMAN G J; TURKA L A; THOMPSON C B; JUNE C H
AUTHOR ADDRESS: NAVAL MED. RES. INST., BETHESDA, MD. 20889.
JOURNAL: TWENTY-EIGHTH NATIONAL MEETING OF THE SOCIETY FOR LEUKOCYTE BIOLOGY AND THE TWENTY-FIRST LEUKOCYTE CULTURE CONFERENCE, ASPEN, COLORADO, USA, SEPTEMBER 28-OCTOBER 1, 1991. J LEUKOCYTE BIOL 0 (SUPPL. 2). 1991. 23. **1991**
CODEN: JLBIE
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

7/7/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07865475 BIOSIS NO.: 000092124841
SELECTIVE INDUCTION OF **B7**-BB-1 ON INTERFERON-GAMMA STIMULATED MONOCYTES A POTENTIAL MECHANISM FOR AMPLIFICATION OF T CELL ACTIVATION THROUGH THE **CD28** PATHWAY
AUTHOR: FREEDMAN A S; FREEMAN G J; RHYNHART K; NADLER L M
AUTHOR ADDRESS: DEP. MEDICINE, HARVARD MEDICAL SCHOOL, CAMBRIDGE, MASS.
JOURNAL: CELL IMMUNOL 137 (2). 1991. 429-437. **1991**
FULL JOURNAL NAME: Cellular Immunology
CODEN: CLIMB
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: The B cell activation antigen **B7**/BB-1 is the natural ligand for the T cell antigen **CD28** and these two molecules are capable of mediating T-B cell adhesion. Engagement of the CD28 pathway provides a costimulatory signal to T cells leading to enhanced lymphocyte production. We report that interferon-.gamma. (INF-.gamma.) induces the expression of B7/BB-1 on monocytes. This induction was very specific since other cytokines and stimuli which activate monocytes including M-CSF, GM-CSL, IL3, TNF-.alpha., and LPS were unable to induce B7/BB-1. Following culture of monocytes with INF-.gamma., maximal mRNA and cell surface B7/BB-1 expression was detected at 12 and 24 hr, respectively. In addition to antigen presentation, optimal T cell activation and lymphokine synthesis require an additional cell to cell contact signal provided by the antigen presenting cell. The induction of **B7**/BB-1 on monocytes and subsequent heterophilic interaction of **B7**/BB-1 with **CD28** may provide a mechanism for the amplification of T cell proliferation and lymphokine production by INF-.gamma. activated monocytes.

7/7/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07842496 BIOSIS NO.: 000092112662
CTLA-4 IS A SECOND RECEPTOR FOR THE B CELL ACTIVATION ANTIGEN

B7
AUTHOR: LINSLEY P S; BRADY W; URNES M; GROSMAIRE L S; DAMLE N K; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN DIVISION, BRISTOL-MYERS SQUIBB RES. INST., 3005 FIRST AVENUE, SEATTLE, WASHINGTON 98121.
JOURNAL: J EXP MED 174 (3). 1991. 561-570. **1991**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Functional interactions between T and B lymphocytes are necessary for optimal activation of an immune response. Recently, the T lymphocyte receptor **CD28** was shown to bind the **B7** counter-receptor on activated B lymphocytes, and subequently to costimulate interleukin 2 production and T cell proliferation. **CTLA**-4 is a predicted membrane receptor from cytotoxic T cells that is homologous to CD28 and whose gene maps to the same chromosomal band as the gene for CD28. It is not known, however, if CD28 and CTLA-4 also share functional properties. To investigate functional properties of CTLA-4, we have produced a soluble genetic fusion between the extracellular domain of CTLA-4 and an immunoglobulin C.gamma. chain. Here, we show that the fusion potein encoded by this construct. **CTLA4Ig**, bound specifically to **B7** -transfected Chinese hamster ovary cells and to lymphoblastoid cells. **CTLA4Ig** also immunoprecipitated **B7** from cells surface 125I-labeled extracts of these cells. The avidity of 125I-labeled **B7Ig** fusion protein for immobilized **CTLA4Ig** was estimated (Kd .apprx. 12 nM). Finally, we show that **CTLA4Ig** was a potent inhibitor of in vitro immune responses dependent upon cellular interactions between T and B lymphocytes. These findings provice direct evidence that, like its structural homologue **CD28**, **CTLa**-4 is able to bind the **B7** counter-receptor on activated B cells. Lymphocyte interactions involving the **B7** counter-receptor are functionally important for alloantigen responses in vitro.

7/7/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07842389 BIOSIS NO.: 000092112555
STRUCTURE EXPRESSION AND T CELL COSTIMULATORY ACTIVITY OF THE MURINE HOMOLOGUE OF THE HUMAN B LYMPHOCYTE ACTIVATION ANTIGEN B7
AUTHOR: FREEMAN G J; GRAY G S; GIMMI C D; LOMBARD D B; ZHOU L-J; WHITE M; FINGEROTH J D; GRIBBEN J G; NADLER L M
AUTHOR ADDRESS: DIVISION TUMOR IMMUNOLOGY, DANA-FARBER CANCER INST., MAYER 726, 44 BINNEY STREET, BOSTON, MASS. 02115.
JOURNAL: J EXP MED 174 (3). 1991. 625-632. **1991**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Following occupancy of the T cell receptor by antigen, T cell proliferation and lymphokine production are determined by a second costimulatory signal delivered by a ligand expressed on antigen presenting cells. The human B cell activation antigen B7, which is expressed on antigen presenting cells including activated B cells and .gamma. in terferon treated monocytes, has been shown to deliver such a costimulatory signal upon attachmet to its ligand on T cells, **CD28**. We have cloned and sequenced the murine homologue of the human **B7** gene. The predicted murine protein has 44% amino acid identity with human B7. The greatest similarity is in the Ig-V and Ig-C like domains. Murine B7 mRNA was detected in murine hematopoietic cells of B cell but not T

cell origin. Cells transfected with murine **B7** provided a costimulatory signal to human **CD28**+ T lymphocytes. These results demonstrate the costimulatory activity of murine **B7** and provide evidence that the ligand attachment site is conserved between the two species.

7/7/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07795565 BIOSIS NO.: 000092088136
B-CELL SURFACE ANTIGEN B7 PROVIDES A COSTIMULATORY SIGNAL THAT INDUCES T CELLS TO PROLIFERATE AND SECRETE INTERLEUKIN 2
AUTHOR: GIMMI C D; FREEMAN G J; GRIBBEN J G; SUGITA K; FREEDMAN A S; MORIMOTO C; NADLER L M
AUTHOR ADDRESS: DIV. TUMOR IMMUNOL., DANA-FARBER CANCER INST., MAYER 730, 44 BINNEY ST., BOSTON, MASS. 02115.
JOURNAL: PROC NATL ACAD SCI U S A 88 (15). 1991. 6575-6579. **1991**
FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the United States of America
CODEN: PNASA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Occupancy of the T-cell receptor complex does not appear to be a sufficient stimulus to induce a T-cell-mediated immune response. Increasing evidence suggests that cognate cell-cell interaction between an activated T cell and an antigen-presenting cell may provide such a stimulus. A candidate T-cell surface molecule for this costimulatory signal is the T-cell-restricted CD28 antigen. Following crosslinking with anti-CD28 mAb, suboptimally stimulated CD28+ T cells show increased proliferation and markedly increased secretion of a subset of lymphokines. Recently, the B-cell surface activation antigen **B7** was shown to be a natural ligand for the **CD28** molecule, and both **B7** and **CD28** are members of the immunoglobulin superfamily. Here we report that **B7**-transfected CHO cells can induce suboptimally activated **Cd28**+ T cells to proliferate and secrete high levels of interleukin 2. The response is identical whether T cells are submitogenically stimulated with either phorbol myristate acetate or anti-CD3 to activate the T cells. This response in specific and can be totally abrogated with anti-**B7** monoclonal antibody. As has previously been observed for anti-**CD28** monoclonal antibody, **B7** ligation induced secretion of interleukin 2 but not interleukin 4. We have previously demonstrated that **B7** expression is restricted to activated B lymphocytes and interferon .gamma.-activated monocytes. Since these two cellular populations are involved in antigen presentation as well as cognate interaction with T lymphocytes, B7 is likely to represent a central costimulatory signal that is capable of amplifying an immune response.

7/7/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07678138 BIOSIS NO.: 000092025059
DIRECT HELPER T CELL-INDUCED B CELL DIFFERENTIATION INVOLVES INTERACTION BETWEEN T CELL ANTIGEN **CD28** AND B CELL ACTIVATION ANTIGEN **B7**
AUTHOR: DAMLE N D; LINSLEY P S; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS SQUIBB PHARMACEUTICAL RES. INST., 3005 FIRST AVE., SEATTLE, WASH. 98121, USA.
JOURNAL: EUR J IMMUNOL 21 (5). 1991. 1277-1282. **1991**
FULL JOURNAL NAME: European Journal of Immunology

CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Cognate interactions between major histocompatibility complex class II antigen (Ag)-reactive CD4+ T helper (Th) and Ag-presenting B cells induce first the activation of B cells and their subsequent differentiation into Ig-secreting cells (IgSC). The Th cell-associated homodimeric glycoprotein **CD28** has been implicated as an important regulator of Th activation. Recently, B cell-associated early activation Ag **B7** has been identified as a ligand for the **CD28** molecule. In this study, we have examined using monoclonal antibodies (mAb) the roles of **CD28** and **B7** molecules during the Th-B cell cognate interactions leading to the differentiation of **B7**+ B cells. Anti-**CD28** mAb 9.3 specifically inhibited proliferative responses of CD4+ T cells to both allogeneic B cells and soluble Ag-presenting autologous non-T cells. In addition, anti-CD28 mAb 9.3 inhibited Th-induced differentiation of alloantigen-presenting B cells into ISC. Similar inhibition of both Ag-induced Th activation and B cell differentiation into ISC was observed using mAb BB1 which recognizes a B cell-associated molecule B7. In contrast, non-cognate Th-independent exogenous interleukin 6-induced differentiation of **B7**+ B cells into ISC was not inhibited by mAb to either molecule. These results clearly demonstrate the involvement of **CD28** on Th and its ligand **B7** on B cells during cognate Th-B interactions leading to the differentiation of B cells. Furthermore, these results also suggest the development of new mAb-based therapeutic approaches for exaggerated B cell activation associated with certain autoimmune diseases such as systemic lupus erythematosus.

7/7/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07634930 BIOSIS NO.: 000092004874
IL-4 AND IL-2 UPREGULATE THE EXPRESSION OF ANTIGEN **B7** THE B CELL COUNTERSTRUCTURE TO T CELL **CD28** AN AMPLIFICATION MECHANISM FOR T CELL-B CELL INTERACTIONS
AUTHOR: VALLE A; AUBRY J-P; DURAND I; BANCHEREAU J
AUTHOR ADDRESS: SCHERING-PLOUGH, LAB. IMMUNOLOGICAL RES., 27 CHEMIN DES PEUPLIERS, BP 11, 69570 DARDILLY, FRANCE.
JOURNAL: INT IMMUNOL 3 (3). 1991. 229-236. **1991**
CODEN: INIME
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: We recently generated mAb 104 which is specific for the B cell activation antigen Ag B7. With this we studied the regulation of Ag B7 expression on normal tonsillar B lymphocytes as well as the activities of B7+ and B7- activated B cells. SAC and to a lesser extent anti-IgM antibody upregulated Ag B7 and this was further enhanced by IL-2 and most notably IL-4. Ag B7 was expressed on virtually all sIgG+ and sIgA+ B cells and approximately half of the sIgD+ and sIgM+ B cells. SAC-stimulated B7+ cells proliferated and produced IgM, IgG and IgA in response to IL-2 and IgM and IgG in response to IL-2 and IL-4. Considering that Ag **B7** has recently been shown to be the counterstructure of the T cell **CD28** and that **CD28** triggering strongly enhance cytokine production by T cells, it is likely that the **CD28/B7** interaction represents an important amplification phenomenon in T-B cell interaction leading to humoral immune responses. The preferential expression of Ag **B7** on IgG and IgA committed cells suggests that **CD28/B7** interaction may be more specific to seocndary antibody responses provided by memory T and B cells.

7/7/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07627948 BIOSIS NO.: 000040128157
CD28 BINDING AND T CELL COSTIMULATORY ACTIVITY OF THE B CELL ACTIVATION ANTIGEN **B7**
AUTHOR: LINSLEY P S; BRADY W A; DAMLE N K; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN, BRISTOL-MYERS-SQUIBB PHARM. RES. INST., 3005 FIRST AVE., SEATTLE, WA 98121.
JOURNAL: 75TH ANNUAL MEETING OF THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY, ATLANTA, GEORGIA, USA, APRIL 21-25, 1991. FASEB (FED AM SOC EXP BIOL) J 5 (4). 1991. A617. **1991**
CODEN: FAJOE
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

7/7/10 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07544244 BIOSIS NO.: 000091096322
THE **CD28** LIGAND **B7**-BB1 PROVIDES COSTIMULATORY SIGNAL FOR ALLOACTIVATION OF CD4-POSITIVE T CELLS
AUTHOR: KOULOVA L; CLARK E A; SHU G; DUPONT B
AUTHOR ADDRESS: IMMUNOGENETICS LAB., BOX 41, MEMORIAL SLOAN-KETTERING CANCER CENT., 1275 YORK AVENUE, NEW YORK, N.Y. 10021.
JOURNAL: J EXP MED 173 (3). 1991. 759-762. **1991**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Activation via the T lymphocyte cell surface molecular CD28 provides a potent amplification signal for interleukin 2 (IL-2) production in several in vitro systems. The B lymphocyte activation antigen, **B7**/BB1, is a natural ligand for **CD28**. Here was investigate the role of **CD28** and **B7**/BB1 in primary activation of CD4+ T lymphocytes stimulated with allogeneic B lymphoblastoid cell lines. A subset of peripheral CD4+ T cells that is unresponsive to crosslinking of CD3/T cell receptor (TCR) with CD3 monoclonal antibody (mAb) does proliferate in response to allogeneic B lymphoblasts. TCR binding to allogeneic major histocompatibility complex antigens was an absolute requirement for activation of these cells because mAbs to either CD3 or human histocompatibility leukocyte antigen (HLA) class II completely inhibited activation. **CD28** and **B7**/BB1 antibodies inhibited T cell proliferation 90% and 84%, respectively. Similar results were obtained with the total CD4+ T lymphocyte population. Crosslinking of HLA-DR antigens on small, resting B cells induced rapid expression of B7/BB1, which peaked at 6 h and returned to baseline levels within 18 h. These data demonstrate that CD 28-B7/BB1 binding provides an important early second signal for alloactivation of CD4+ T lymphocyte by B lymphoblasts. The results also suggest that T cells interacting with allogeneic resting B cells may induced B7/BB1 expression in the alloantigen-presenting cell as a consequence of interaction between the TCR and class II molecules.

7/7/11 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07544016 BIOSIS NO.: 000091096094
BINDING OF THE B CELL ACTIVATION ANTIGEN **B7** TO **CD28** COSTIMULATES T CELL PROLIFERATION AND INTERLEUKIN 2 MESSENGER RNA ACCUMULATION
AUTHOR: LINSLEY P S; BRADY W; GROSMAIRE L; ARUFFO A; DAMLE N K; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS-SQUIBB PHARMACEUTICAL RES. INST., 3005 FIRST AVENUE, SEATTLE, WASH. 98121.
JOURNAL: J EXP MED 173 (3). 1991. 721-730. **1991**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: A successful immune response requires intercellular contact between T and B lymphocytes. We recently showed that CD28, a T cell surface protein that regulates an activation pathway, could mediate intercellular adhesion with activated B cells by interaction with the **B7** antigen. Here we show that CD28 is the primary receptor for B7 on activated peripheral blood T cells, that CD28 binds to **B7** in the absence of other accessory molecules, and that interaction between **CD28** and **B7** is costimulatory for T cell activation. To characterize the binding of **CD28** to **B7**, we have produced genetic fusions of the extracellular portions of **B7** and **CD28**, and immunoglobulin (Ig) C.gamma.1 chains. 125I-labeled **B7** Ig bound to **CD28**-transfected Chinese hamster ovary (CHO) cells, and to immobilized **CD28** Ig with a Kd .apprx. 200 nM. **B7** Ig also inhibited **CD28**-mediated cellular adhesion. The function of **CD28**-**B7** interactions during T cell activation was investigated with soluble fusion proteins and with **B7**-transfected CHO cells. Immobilized **B7** Ig and B7+ CHO cells costimulated T cell proliferation. Stimulation of T cells with **B7**+ CHO cells also specifically increased levels of interleukin 2 transcripts. These results demonstrate that the **CD28** signaling pathway could be activated by **B7**, resulting in increased T cell cytokine production and T cell proliferation. Cellular interactions mediated by **B7** and **CD28** may represent an important component of the functional interactions between T and B lymphoid cells.

7/7/12 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07295839 BIOSIS NO.: 000090075726
T CELL ANTIGEN **CD28** MEDIATES ADHESION WITH B CELLS BY INTERACTING WITH ACTIVATION ANTIGEN **B7**-BB-1
AUTHOR: LINSLEY P S; CLARK E A; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN, 3005 FIRST AVE., WASHINGTON 98121.
JOURNAL: PROC NATL ACAD SCI U S A 87 (13). 1990. 5031-5035. **1990**
FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the United States of America
CODEN: PNASA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Studies using monoclonal antibodies (mAbs) have implicated the homodimeric glycoprotein CD28 as an important regulator of human T-cell activation, in part by posttranscriptional control of cytokine mRNA levels. Although the CD28 antigen has functional and structural characteristics of a receptor, a natural ligand for this molecule has not been identified. Here we show that the CD28 antigen, expressed in Chinese

hamster overy (CHO) cells, mediated specific intercellular adhesion with human lymphoblastoid and leukemic B cell lines and with activated primary murine B cells. CD28-mediated adhesion wasnot dependent upon divalent cations. Several mAbs were identifed that inhibited **CD28**-mediated adhesion, including mAbs BB-1 against the B-cell activation antigen **B7**/BB-1 in some mAbs against major histocompatibility complex class I antigens. **B7**/BB-1 expression correlated closely with **Cd28** -mediated ahesion, but class I expression did not. Transfected COS cells expressing the **B7**/BB-1 antigen adhered to **CD28**+ CHO cells; this adhesion was blocked by mAbs to **CD28** and **B7**/BB-1. The specific recognition by **CD28** of the B-cell activation antigen **B7**/BB-1 represents a heterophilic interaction between members of the immunoglobulin superfamily that may serve to regulate T-cell cytokine levels at sites of B-cell activation.

7/7/13 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

04710463 EMBASE No: 1991203817
Regulation of human B-cell activation and adhesion
Clark E.A.; Lane P.J.L.
Department of Microbiology, Regional Primate Research Ctr, University of Washington,Seattle, WA 98195 United States
Annual Review of Immunology (ANNU. REV. IMMUNOL.) (United States) 1991, 9/- (97-127)
CODEN: ARIMD ISSN: 0301-3782
DOCUMENT TYPE: Journal; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Human B lymphocyte differentiation is regulated by signals transmitted after binding of cytokines to their specific receptors and/or cross-linking of cell-cell adhesion receptors. In addition to surface immunoglobulin (sIg) receptors for antigen, a number of B cell-associated surface molecules have now been identified which may regulate activation and adhesion of B cells. These include members of the Ig supergene family such as CD19, CD22, B7/BB1, and BMC1, cell surface enzymes such as CD10, CD73, and CDw75, and proteins with multiple transmembrane domains such as CD20 and CD37. In this review we describe how several of these accessory molecules may affect signaling via antigen receptors and influence primary vs secondary immune responses. For instance, signaling via either CD21 or CD22 can augment responses to anti-Ig; the B cell activation marker **B7**/BB1 may function to trigger T cells via its ligand, **CD28**, to produce cytokines which in turn stimulate B cells; and the receptor, CD40 may transmit a signal to protect germinal center B cells from undergoing programmed cell death. Understanding how B cell accessory molecules regulate key interconnections during development may provide insights into the control and management of diseases with B-cell dysfunctions.

7/7/14 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

04643088 EMBASE No: 1991137131
IL-4 and IL-2 upregulate the expression of antigen **B7**, the B cell counterstructure to T cell **CD28**: An amplification mechanism for T-B cell interactions
Valle A.; Aubry J.-P.; Durand I.; Banchereau J.
Schering-Plough, Laboratory for Immunological, Research, 27 Chemin des Peupliers,69570 Dardilly France
International Immunology (INT. IMMUNOL.) (United Kingdom) 1991, 3/3 (229-235)

CODEN: INIME ISSN: 0953-8178
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

We recently generated mAb 104 which is specific for the B cell activation antigen Ag B7. With this we studied the regulation of Ag B7 expression on normal tonsillar B lymphocytes as well as the activities of B7sup + and B7sup - activated B cells. SAC and to a lesser extent anti-IgM antibody upregulated Ag B7 and this was further enhanced by IL-2 and most notably IL-4. Ag B7 was expressed on virtually all slgGsup + and slgAsup + B cells and approximately half of the slgDsup + and slgMsup + B cells. SAC-stimulated B7sup + B cells proliferated and produced IgM, IgG and IgA in response to IL-2 and IgM and IgG in response to IL-4. SAC-stimulated B7sup - B cells proliferated and produced only IgM in response to IL-2 and IL-4. Considering that Ag **B7** has recently been shown to be the counterstructure of the T cell **CD28** and that **CD28** triggering strongly enhances cytokine production by T cells, it is likely that the **CD28/B7** interaction represents an important amplification phenomenon in T-B cell interaction leading to humoral immune responses. The preferential expression of Ag **B7** on IgG and IgA commited cells suggests that **CD28/B7** interaction may be more specific to secondary antibody responses provided by memory T and B cells.

7/7/15 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

04618099 EMBASE No: 1991112142
The **CD28** ligand **B7**/BB1 provides costimulatory signal for alloactivation of CD4sup + T cells
Koulova L.; Clark E.A.; Shu G.; Dupont B.
Human Immunogenetics Lab., Memorial Sloan-Kettering, Cancer Center, 1275 York Avenue,New York, NY 10021 United States
Journal of Experimental Medicine (J. EXP. MED.) (United States) 1991, 173/3 (759-762)
CODEN: JEMEA ISSN: 0022-1007
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Activation via the T lymphocyte cell surface molecule CD28 provides a potent amplification signal for interleukin 2 (IL-2) production in several in vitro systems. The B lymphocyte activation antigen, **B7**/BB1, is a natural ligand for **CD28**. Here we investigate the role of **CD28** and **B7**/BB1 in primary activation of CD4sup + T lymphocytes stimulated with allogeneic B lymphoblastoid cell lines. A subset of peripheral CD4sup + T cells that is unresponsive to crosslinking of CD3/T cell receptor (TCR) with CD3 monoclonal antibody (mAb) does proliferate in response to allogeneic B lymphoblasts. TCR binding to allogeneic major histocompatibility complex antigens was an absolute requirement for activation of these cells because mAbs to either CD3 or human histocompatibility leukocyte antigen (HLA) class II completely inhibited activation. **CD28** and **B7**/BB1 antibodies inhibited T cell proliferation 90% and 84%, respectively. Similar results were obtained with the total CD4sup + T lymphocyte population. Crosslinking of HLA-DR antigens on small, resting B cells induced rapid expression of **B7**/BB1, which peaked at 6 h and returned to baseline levels within 18 h. These data demonstrate that **CD28-B7**/BB1 binding provides an important early second signal for alloactivation of CD4sup + T lymphocyte by B lymphoblasts. The results also suggest that T cells interacting with allogeneic resting B cells may induce B7/BB1 expression in the alloantigen-presenting cell as a consequence of interaction between the TCR and class II molecules.

7/7/16 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE

04306025 EMBASE No: 1990188581
Role of the CD28 receptor in T-cell activation
June C.H.; Ledbetter J.A.; Linsley P.S.; Thompson C.B.
Naval Medical Research Institute, Bethesda, MD 20814 United States
Immunology Today (IMMUNOL. TODAY) (United Kingdom) 1990, 11/6 (211-216)
CODEN: IMTOD ISSN: 0167-4919
DOCUMENT TYPE: Journal; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Antigen-specific T-cell activation is initiated through the T-cell receptor. Recent evidence has shown that a number of additional T-cell surface receptors serve to regulate the responses of antigen-activated T cells. One such molecule, **CD28**, is a member of a heterophilic cell adhesion complex, and is the receptor for the B-cell-restricted **B7** /BB-1 antigen. As Carl June, Jeffrey Ledbetter, Peter Linsley and Craig Thompson review here, **CD28** serves as the surface component of a novel signal transduction pathway that modulates T-cell responses to various immunosuppressive agents.

7/7/17 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06889958 91196107 PMID: 2014539
Inhibition of anti-HLA-B7 alloreactive CTL by affinity-purified soluble HLA.
Zavazava N; Hausmann R; Muller-Ruchholtz W
Department of Immunology, University of Kiel, Federal Republic of Germany.
Transplantation (UNITED STATES) Apr **1991**, 51 (4) p838-42, ISSN 0041-1337 Journal Code: 0132144
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
The objective of this study was to elucidate the interaction of naturally occurring soluble MHC class I molecules with alloreactive CTL and to discuss its possible relevance to graft acceptance. An anti-HLA-B7 specific CTL-line, BV.B7, was generated in vitro. On phenotyping the cells after 6 weeks, 80% were found to be CD8+, 14% CD4+ and 6% CD8+CD4+. CD4+ CTL were depleted using immunomagnetic beads precoated with an anti-CD4 antibody. Of the recovered CTL greater than 96% were CD8+. A total of 12 HLA-B7 target cell lines and PHA blasts tested were specifically lysed in a 51Cr-release assay. Soluble HLA class I molecules were isolated on affinity chromatography columns using the anti-HLA-B7 ME 1 and the anti-heavy chain W6/32 monoclonal antibodies. Antigen purity was confirmed by analysis on SDS-PAGE gels. CTL were preincubated with 0.1-1.8 micrograms/ml soluble HLA for 30 min at 37 degrees C and subsequently tested for cytotoxicity in the 51Cr-release assay; 1.1 micrograms/ml HLA-B7 molecules reduced CTL cytotoxicity by 50% whereas non-B7 HLA had no effect. Further, CTL cytotoxicity was reduced by preincubation with anti-CD8, anti-TcR, and anti-CD3 antibodies. We anticipate a possible down-regulatory role of soluble HLA on CTL in allogeneic transplantation.
Record Date Created: 19910513

7/7/18 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06344073 90038461 PMID: 2478616
Analysis of the HLA-Cw3-specific cytotoxic T lymphocyte response of HLA-B7 X human beta 2m double transgenic mice.
Barra C; Perarnau B; Gerlinger P; Lemeur M; Gillet A; Gibier P; Lemonnier F A
Centre d'Immunologie INSERM-CNRS de Marseille-Luminy, France.
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Nov 15 **1989**, 143 (10) p3117-24, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
The cytolytic responses of either normal (non transgenic), HLA-B7 (single transgenic) or HLA-B7 x human beta 2 microglobulin (double transgenic) DBA/2 mice induced by transfected HLA-Cw3 P815 (H-2d) mouse mastocytoma cells were compared, to evaluate whether the expression of an HLA class I molecule in responder mice would favor the emergence of HLA-specific, H-2-unrestricted CTL. Only 8 of 300 HLA-Cw3-specific CTL clones tested could selectively lyse HLA-Cw3-transfected cells in an H-2-unrestricted manner, all having been isolated after hyperimmunization of double transgenic mice. These clones also lysed HLA-Cw3+ human cells. Unexpectedly, the lysis of the human but not that of the murine HLA-Cw3 cells was inhibited by Ly-2,3-specific mAb. Despite significant expression of HLA-B7 class I molecules on transgenic lymphoid cells, including thymic cells, limiting dilution analysis and comparative study of TCR-alpha and -beta gene rearrangements of the eight isolated clones (which suggested that they all derived from the same CTL precursor) indicated that the frequency of HLA-Cw3-specific H-2 unrestricted cytotoxic T lymphocytes remained low (even in HLA-B7 x human beta 2-microglobulin double transgenic mice). This suggests that coexpression of HLA class I H and L chain in transgenic mice is not the only requirement for significant positive selection of HLA class I-restricted cytotoxic mouse T lymphocytes.
Record Date Created: 19891215

7/7/19 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06293460 89381392 PMID: 2476507
Delineation of determinants on HLA-B7 and HLA-B27 that are necessary for cytolytic T cell recognition by using inter- and intra-domain recombinants.
Healy F; Toubert A; Gomard E; Jordan B R; Levy J P
INSERM U 152, CNRS UA 628, Hopital Cochin, Paris, France.
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Oct 1 **1989**, 143 (7) p2357-63, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
We have used bulk culture HLA-B7 and HLA-B27 specific CTL lines derived from 11 donors, and a series of rHLA-B7/HLA-B27 genes transfected into and expressed on the surface of the murine cell P815, to determine the amino acid residues on these HLA class I molecules that are critical for allospecific CTL recognition. The results obtained indicate that for four of six HLA-B7-specific CTL lines the alpha-1 domain for CTL recognition. Furthermore, we found that residues 77 and/or 80 had a critical effect on recognition for all of the CTL lines tested. The region 97-156 in the alpha-2 domain was also important for some of these CTL lines. Furthermore, by using five bulk culture HLA-B27-specific CTL lines we were able to show that residues 77 and/or 80 and residue 152 are also essential for recognition of HLA-B27 by HLA-B27-specific CTL. The strong influence exerted by these residues is discussed in terms of the three-dimensional structure of class I molecules. Finally, a selection was regularly observed

in the bulk cultures such that the CTL that were preferentially influenced by either the alpha-1 or the alpha-2 domain were lost after 4 to 7 wk of culture resulting in CTL cell lines which were extremely sensitive to sequence modifications of HLA-B7 or HLA-B27. The possible reasons for this selection, which we have previously observed with both anti-HLA-A2 and anti-HLA-A3 cell lines and is therefore not unique to HLA-B7 or HLA-B27, are discussed.
Record Date Created: 19891020

7/7/20 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05834265 88258042 PMID: 2454991
Differential recognition by human cytotoxic T cell clones of human M1 fibroblasts transfected with an HLA-B7 gene (JY150) suggests the existence of two different HLA-B7 alleles in the cell line JY (HLA-A2,2;B7,7;Cw-,-;DR4,w6).
van Seventer G A; Spits H; Yssel H; Melief C J; Ivanyi P
Central Laboratory, Netherlands Red Cross Blood Transfusion Service, Amsterdam.
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Jul 15 **1988**, 141 (2) p417-22, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
We have used a panel of human HLA-B7-specific CTL clones to identify an HLA-B7 gene (JY150) transfected into human M1 fibroblasts (M1/B7). Only a subset of the CTL clones recognized the M1/B7 cells, whereas all CTL clones recognized the donor of the B7 gene, the cell line JY (HLA-A2,2;B7,7;Cw-,-;DR4,w6). Analysis of the fine specificity of these CTL clones was performed by testing the reactivity on M1 cells transfected with an HLA-B27K gene and on a panel of cell lines typed for HLA-B7 subtypes (variants). These results, combined with one-dimensional IEF analysis of the M1/B7 cells and the B7 subtypes, indicated that the differential recognition by the CTL clones of the transfected gene was not caused by aberrant expression of the gene itself or due to the absence of critical accessory molecules on the M1 fibroblast cells. Our data suggest that the widely used HLA-B7 reference cell line JY is not homozygous at the HLA-B locus, but contains two different B7 alleles encoding the B7.2 and B7.4 subtypes.
Record Date Created: 19880803

7/7/21 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05473184 87224047 PMID: 3035018
Reduced allorecognition of adenovirus-2 infected cells.
Andersson M; McMichael A; Peterson P A
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Jun 1 **1987**, 138 (11) p3960-6, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
The early region 3 of adenovirus 2 encodes the membrane glycoprotein E19. This protein specifically binds class I transplantation antigens of a variety of species. Concomitant with this interaction the intracellular transport of newly synthesized class I heavy chains is abrogated. At late stages of the virus infection this leads to a notable decrease in the cell surface expression of class I antigens. We have studied how infection with adenovirus 2 influences target cell recognition by alloreactive cytolytic T

lymphocytes. We found that the E19 protein-induced reduction of the HLA-B7 cell surface expression led to a greatly reduced lysis of the infected cells. These findings support our hypothesis that the E19 protein has evolved to facilitate the in vivo replication of the virus by reducing the expression of HLA class I antigens.
Record Date Created: 19870702

7/7/22 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05151886 86225991 PMID: 3519831
A lymphokine that activates the cytolytic program of both cytotoxic T lymphocyte and natural killer clones.
Milanese C; Siliciano R F; Schmidt R E; Ritz J; Richardson N E; Reinherz E L
Journal of experimental medicine (UNITED STATES) Jun 1 **1986**, 163 (6) p1583-8, ISSN 0022-1007 Journal Code: 2985109R
Contract/Grant No.: AI19807; AI; NIAID; AI21226; AI; NIAID; CA40134; CA; NCI
Retraction in Reinherz EL. J Exp Med. 1987 Jan 1;165(1) 275; Retraction in PMID 3553413
Document type: Journal Article; Retracted Publication
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
A 10-12 kD lymphokine, herein termed TCAF, was recently shown to be secreted from Th after crosslinking of their antigen/MHC (T3-Ti) receptors. TCAF stimulates resting T lymphocyte proliferation via binding to surface components of the T11 pathway. To determine whether TCAF could induce antigen-independent activation of the lytic machinery of cytotoxic cells, the present studies were conducted. In the presence of TCAF, both T8+ class I MHC-specific and T4+ class II MHC-specific cytotoxic T cell clones were induced to kill targets, including those lacking the appropriate MHC molecules. This effect was unique to TCAF, since IL-1, IL-2, IFN-gamma could not stimulate lytic activity. Furthermore, both T3+T11+ and T3-T11+ NK clones were triggered to lyse NK-resistant target cells. These findings suggest that TCAF can function in an antigen-independent fashion to amplify cytotoxic effector responses.
Record Date Created: 19860709

7/7/23 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04851834 85235612 PMID: 2409157
Multiple epitopes on human and murine cells expressing HLA-B7 as defined by specific murine cytotoxic T cell clones.
Yannelli J R; Moore L C; Engelhard V H
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Aug **1985**, 135 (2) p900-5, ISSN 0022-1767 Journal Code: 2985117R
Contract/Grant No.: AI20963; AI; NIAID; AI21393; AI; NIAID; CA00835; CA; NCI; +
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Eleven cytotoxic T lymphocyte (CTL) clones were derived from C57BL/6 spleen cells immunized with HLA-B7 expressing human lymphoblastoid cell lines. Reactivity against HLA-B7 was initially established because the clones lysed 2 target cells that shared only HLA-B7 with the immunizing cell line and they did not lyse five other cell lines that were HLA-B7 negative but expressed other class I or class II antigens found on the immunizing cell. Six of the clones were subsequently shown to lyse all

tested HLA-B7-positive B and T lymphoid cell lines, peripheral blood lymphocytes, and a murine L cell that expressed HLA-B7 as a consequence of DNA-mediated gene transfer. On the basis of the inability of the clones to lyse a panel of HLA-B7-negative cell lines, up to 18 other class I antigens could be eliminated as being cross-reactively recognized. However, two of the clones recognized a single HLA-B7-negative cell line. It is suggested that in these cases the clones were cross-reactively recognizing the HLA-B27 or HLA-B40 antigens that were present on these target cells. The remaining five CTL clones failed to lyse one out of seven tested HLA-B7-positive lymphoid lines (either RPMI-1788 or DR1B) and failed to lyse peripheral blood lymphocytes from one out of three tested HLA-B7-positive individuals. These five clones also did not recognize the HLA-B7-positive murine L cell. However, based on analysis with a large target cell panel, the reactivity pattern of these five clones could only be correlated with recognition of HLA-B7. This conclusion is further supported by antibody-blocking studies to be reported elsewhere. As before, lysis of single HLA-B7-negative target cells by two of the clones could be ascribed to recognition of HLA-B27 or HLA-B40. The results show that murine clones raised against HLA-B7 exhibit a high degree of specificity for determinants that are unique or largely confined to the HLA-B7 alloantigen. In addition, these clones define different antigenic determinants on the molecule. Thus, such clones appear to be excellent candidates for use as human tissue typing reagent. The results further show that there is a strong correlation between recognition of particular HLA-B7-positive human cell lines and recognition of the HLA-B7 expressing murine L cell. Possible reasons for such a correlation and their relationship to the general phenomenon of CTL recognition are discussed.

Record Date Created: 19850819

7/7/24 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04806555 85184044 PMID: 2985705

Construction of novel class I histocompatibility antigens by interspecies exon shuffling.

Engelhard V H; Yannelli J R; Evans G A; Walk S F; Holterman M J

Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Jun **1985**, 134 (6) p4218-25, ISSN 0022-1767 Journal Code: 2985117R

Contract/Grant No.: AI20963; AI; NIAID; AI21393; AI; NIAID; CA00835; CA; NCI

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Human and mouse class I histocompatibility antigens share considerable structural homology at both the protein and DNA sequence level. This homology has allowed the production of hybrid class I molecules by the reciprocal exchange of DNA sequences corresponding to equivalent domains of HLA-B7 and either H-2Ld or H-2Dd. It is shown that these genes give rise to protein products that are stably expressed on the surface of murine L cells after DNA-mediated gene transfer. These proteins express only those monoclonal antibody-defined H-2 determinants that are expected based on their genetic construction. The molecules have allowed the localization of a number of polymorphic and monomorphic HLA-specific epitopes. In all but one case, expression of an epitope on a domain does not appear to be influenced by the replacement of adjacent human domains with their murine equivalents, suggesting a considerable degree of structural independence of the domains. Cells expressing the hybrid molecules have also been tested as targets for a panel of HLA-B7-specific cytotoxic T cell clones. The results show that the polymorphic determinants recognized by these clones map to the alpha 1 and alpha 2 domains of the HLA-B7 molecule. No evidence for an influence of species-related amino acid sequence differences in the third extracellular domain on T cell recognition was seen. The results are

discussed in light of the proposed domain structure of the class I proteins and the potential use of such molecules for further functional studies.
Record Date Created: 19850620

7/7/25 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04656957 85031806 PMID: 6436376
Coexpression of the human HLA-A2 or HLA-B7 heavy chain gene and human beta 2-microglobulin gene in L cells.
Bernabeu C; Maziarz R; Spits H; de Vries J; Burakoff S J; Terhorst C
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Dec **1984**, 133 (6) p3188-94, ISSN 0022-1767 Journal Code: 2985117R
Contract/Grant No.: AI-15066; AI; NIAID
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
L cells expressing human HLA-A2 or HLA-B7 class I antigen heavy chains are not recognized by human cytotoxic T lymphocytes directed at HLA-A2 or HLA-B7 antigens. To test whether the absence of human beta 2-m was the cause of the lack of recognition by the human cytotoxic T lymphocytes, coexpression of the human beta 2-m gene and the HLA-A2 or HLA-B7 heavy chain in L cells ("double transfectants") was obtained. In addition, L cells expressing HLA-A2 or HLA-B7 antigens in association with human beta 2-m were obtained by an exchange reaction, in which human beta 2-m from serum replaced the endogenous murine beta 2-m. Both types of transfectant cells were used in 51Cr-release assays and cold target inhibition assays for human cytotoxic T cell clones which were directed at HLA-A2 or HLA-B7. Neither human CTL clones nor a mixture of CTL specific for HLA-A2 and HLA-B7 were able to recognize these cells. Several alternative explanations for these observations are discussed.
Record Date Created: 19841219

7/7/26 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

04325761 84009135 PMID: 6352810
Expression of the major histocompatibility antigens HLA-A2 and HLA-B7 by DNA-mediated gene transfer.
Bernabeu C; Finlay D; van de Rijn M; Maziarz R T; Biro P A; Spits H; de Vries J; Terhorst C P
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Oct **1983**, 131 (4) p2032-7, ISSN 0022-1767 Journal Code: 2985117R
Contract/Grant No.: AI-15066; AI; NIAID
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Genes coding for the heavy chain of the class I antigens HLA-A2 or HLA-B7 of the human major histocompatibility complex have been introduced into mouse LtK- cells by cotransfection with the herpes simplex virus thymidine kinase gene. HAT-resistant colonies were isolated expressing either HLA-A2 or HLA-B7 as monitored by indirect immunofluorescence. Immunoprecipitation analysis of both antigens by either sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) or isoelectric focusing (IEF) showed that they were identical to the HLA-A2 and HLA-B7 expressed in the human lymphoblastoid cell line JY (homozygous HLA-A2, HLA-B7). However, human cytotoxic T lymphocytes (CTL) generated against JY and CTL clones specific for HLA-A2 or HLA-B7 were unable to recognize the transfectants as targets. These results indicate that the human HLA-A2 (or B7) complexed with the murine beta 2-microglobulin could be an inappropriate target structure for

the CTL. However, because the transfectants are not killed by human CTL even in the presence of lectins, it is suggested that other molecules that are not able to overcome the human-mouse species barrier may be involved in the killing mechanism.
Record Date Created: 19831123

7/7/27 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

115112275 CA: 115(11)112275t JOURNAL
Signal transduction via CD4, CD8, and CD28 in mature and immature thymocytes. Implications for thymic selection
AUTHOR(S): Turka, Laurence A.; Linsley, Peter S.; Paine, Robert, III; Schieven, Gary L.; Thompson, Craig B.; Ledbetter, Jeffrey A.
LOCATION: Dep. Med., Univ. Michigan, Ann Arbor, MI, 48109, USA
JOURNAL: J. Immunol. DATE: 1991 VOLUME: 146 NUMBER: 5 PAGES: 1428-36
CODEN: JOIMA3 ISSN: 0022-1767 LANGUAGE: English
SECTION:
CA215002 Immunochemistry
IDENTIFIERS: CD4 antigen thymocyte signal transduction
DESCRIPTORS:
Antigens,CD3...
antigen receptor complex, signal transduction in immature thymocyte via, CD4 and CD8 and CD28 antigens enhancement of, clonal selection in relation to
Receptors,TCR (T-cell antigen receptor)...
CD3 antigen complex, signal transduction in thymocyte via, CD4 and CD8 and CD18 antigens enhancement of, clonal selection in relation to
Antigens,B7/BB-1...
of thymus gland stroma, CD28 antigen role in TCR-mediated signal transduction and clonal deletion in relation to
Thymus gland,thymocyte...
TCR-mediated signal transduction in immature, CD4 and CD8 and CD28 antigens enhancement of, clonal selection in relation to
Antigens,CD28... Antigens,CD4... Antigens,CD8...
TCR-mediated signal transduction in immature thymocyte enhancement by, clonal selection in relation to
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     $0.26  Estimated cost this search
     $0.26  Estimated total session cost   0.076 DialUnits

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*File 155: Alert feature enhanced for multiple files, duplicates
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Alert feature enhanced for multiple files, etc. See HELP ALERT.

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(20n)(b7? or t(w)cell? or t(w)lymphocyt?)
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        3542008  INHIBIT?
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         710000  SUPPRESS?
        5713669  TREAT?
        5292829  THERAP?
          20254  B7?
        4225535  T
        8776349  CELL?
         541452  T(W)CELL?
        4225535  T
        1072563  LYMPHOCYT?
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                  T(W)LYMPHOCYT?)
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...completed examining records
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 3/3/1      (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
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07890677   BIOSIS NO.: 000092139978
DIFFERENTIAL REGULATION BY DEXAMETHASONE AND CYCLOSPORINE OF HUMAN T CELLS
  ACTIVATED BY VARIOUS STIMULI
AUTHOR: FURUE M; ISHIBASHI Y
AUTHOR ADDRESS: DEP. DERMATOL., UNIV. TOKYO, 7-3-1 HONGO, BUNKYO-KU, TOKYO
  113, JPN.
JOURNAL: TRANSPLANTATION (BALTIMORE) 52 (3). 1991. 522-526. 1991
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)
CODEN: TRPLA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH


 3/3/2      (Item 2 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
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07866434   BIOSIS NO.: 000092125800
A SYNTHETIC PEPTIDE WITH SEQUENCE IDENTITY TO THE TRANSMEMBRANE PROTEIN
  GP41 OF HIV-1 INHIBITS DISTINCT LYMPHOCYTE ACTIVATION PATHWAYS DEPENDENT
  ON PROTEIN KINASE C AND INTRACELLULAR CALCIUM INFLUX
AUTHOR: RUEGG C L; STRAND M
AUTHOR ADDRESS: DEP. PHARMACOLOGY MOLECULAR SCIENCES, JOHNS HOPKINS
  UNIVERSITY SCHOOL MEDICINE, 725 N. WOLFE ST., BIOPHYSICS 311, BALTIMORE,
  MD 21205, USA.
JOURNAL: CELL IMMUNOL 137 (1). 1991. 1-13. 1991
FULL JOURNAL NAME: Cellular Immunology
CODEN: CLIMB
RECORD TYPE: Abstract
LANGUAGE: ENGLISH


 3/3/3      (Item 3 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
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07842496   BIOSIS NO.: 000092112662
CTLA-4 IS A SECOND RECEPTOR FOR THE B CELL ACTIVATION ANTIGEN B7
AUTHOR: LINSLEY P S; BRADY W; URNES M; GROSMAIRE L S; DAMLE N K; LEDBETTER
  J A
AUTHOR ADDRESS: ONCOGEN DIVISION, BRISTOL-MYERS SQUIBB RES. INST., 3005
  FIRST AVENUE, SEATTLE, WASHINGTON 98121.
JOURNAL: J EXP MED 174 (3). 1991. 561-570. 1991
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FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07842389 BIOSIS NO.: 000092112555
STRUCTURE EXPRESSION AND T CELL COSTIMULATORY ACTIVITY OF THE MURINE HOMOLOGUE OF THE HUMAN B LYMPHOCYTE ACTIVATION ANTIGEN B7
AUTHOR: FREEMAN G J; GRAY G S; GIMMI C D; LOMBARD D B; ZHOU L-J; WHITE M; FINGEROTH J D; GRIBBEN J G; NADLER L M
AUTHOR ADDRESS: DIVISION TUMOR IMMUNOLOGY, DANA-FARBER CANCER INST., MAYER 726, 44 BINNEY STREET, BOSTON, MASS. 02115.
JOURNAL: J EXP MED 174 (3). 1991. 625-632. **1991**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07795496 BIOSIS NO.: 000092088067
PHENOTYPIC AND FUNCTIONAL CHARACTERISTICS OF ACTIVATED CD8-POSITIVE CELLS A CD11B-NEGATIVE-CD2-NEGATIVE SUBSET MEDIATES NONCYTOLYTIC FUNCTIONAL SUPPRESSION
AUTHOR: FREEDMAN M S; RUIJS T C G; BLAIN M; ANTEL J P
AUTHOR ADDRESS: MONTREAL NEUROLOGICAL INSTITUTE, 3801 UNVERSITY ST., MONTREAL, QUEBEC, CANADA H3A 2B4.
JOURNAL: CLIN IMMUNOL IMMUNOPATHOL 60 (2). 1991. 254-267. **1991**
FULL JOURNAL NAME: Clinical Immunology and Immunopathology
CODEN: CLIIA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07753316 BIOSIS NO.: 000092067037
INCREASED LYMPHOCYTE BETA-ADRENERGIC RECEPTOR DENSITY IN PROGRESSIVE MULTIPLE SCLEROSIS IS SPECIFIC FOR THE CD8 POSITIVE CD28 NEGATIVE SUPPRESSOR CELL
AUTHOR: KARASZEWSKI J W; REDER A T; ANLAR B; KIM W C; ARNASON B G W
AUTHOR ADDRESS: DEP. NEUROL., UNIV. CHICAGO, 5841 S. MARYLAND AVE., BH BOX 425, CHICAGO, ILL. 60637.
JOURNAL: ANN NEUROL 30 (1). 1991. 42-47. **1991**
FULL JOURNAL NAME: Annals of Neurology
CODEN: ANNED
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07751133 BIOSIS NO.: 000092064854
DISSOCIATION BETWEEN EARLY AND LATE EVENTS IN T CELL ACTIVATION MEDIATED THROUGH CD28 SURFACE MOLECULE
AUTHOR: NUNES J; BAGNASCO M; LOPEZ M; LIPCEY C; MAWAS C; OLIVE D
AUTHOR ADDRESS: UNITE CANCEROL. ET THERAPEUTIUE EXP., U.119, INSERM, 27 BLVD. LEI ROURE, 13009 MARSEILLE, FRANCE.
JOURNAL: MOL IMMUNOL 28 (4-5). 1991. 427-436. **1991**
FULL JOURNAL NAME: Molecular Immunology
CODEN: MOIMD
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07732176 BIOSIS NO.: 000092056807
THE EFFECT OF THE CD28 ACTIVATION PATHWAY ON THE IMMUNOSUPPRESSIVE ACTION OF CYCLOSPORINE
AUTHOR: HESS A D; BRIGHT E C
AUTHOR ADDRESS: 3-127, ONCOLOGY CENTER, JOHNS HOPKINS UNIVERSITY, 600 N. WOLFE ST., BALTIMORE, MD. 21205.
JOURNAL: TRANSPLANTATION (BALTIMORE) 51 (6). 1991. 1232-1240. **1991**
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)
CODEN: TRPLA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07728679 BIOSIS NO.: 000092053310
T CELL RECEPTOR-CD3 AND CD28 USE DISTINCT INTRACELLULAR SIGNALING PATHWAYS
AUTHOR: VAN LIER R A; BROUWER M; DE GROOT E; KRAMER I; AARDEN L A; VERHOEVEN A J
AUTHOR ADDRESS: C/O PUBLICATION SECTETARIAT, CENTRAL LAB., NETHERLANDS RED CROSS BLOOD TRANSFUSION SERVICE, P.O. BOX 9406, NL-1006 AK AMSTERDAM, NETHERLANDS.
JOURNAL: EUR J IMMUNOL 21 (7). 1991. 1775-1778. **1991**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/10 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07685878 BIOSIS NO.: 000092032799
INHIBITION OF T AND B LYMPHOCYTE PROLIFERATION BY RAPAMYCIN
AUTHOR: KAY J E; KROMWEL L; DOE S E A; DENYER M
AUTHOR ADDRESS: SCH. BIOLOGICAL SCI., UNIV. SUSSEX, BRIGHTON BN1 9QG, UK.
JOURNAL: IMMUNOLOGY 72 (4). 1991. 544-549. **1991**
FULL JOURNAL NAME: Immunology
CODEN: IMMUA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/11 (Item 11 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

07678138 BIOSIS NO.: 000092025059
DIRECT HELPER T CELL-INDUCED B CELL DIFFERENTIATION INVOLVES INTERACTION BETWEEN T CELL ANTIGEN CD28 AND B CELL ACTIVATION ANTIGEN B7
AUTHOR: DAMLE N D; LINSLEY P S; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS SQUIBB PHARMACEUTICAL RES. INST., 3005 FIRST AVE., SEATTLE, WASH. 98121, USA.
JOURNAL: EUR J IMMUNOL 21 (5). 1991. 1277-1282. **1991**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/12 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07570505 BIOSIS NO.: 000091111059
FK-506 AND CYCLOSPORIN A INHIBIT HIGHLY SIMILAR SIGNAL TRANSDUCTION PATHWAYS IN HUMAN T LYMPHOCYTES
AUTHOR: LIN C S; BOLTZ R C; SIEKIERKA J J; SIGAL N H
AUTHOR ADDRESS: DEP. IMMUNOL. RES., MERCK SHARP DOHME RES. LAB., P.O. BOX 2000, RAHWAY, N.J. 07065.
JOURNAL: CELL IMMUNOL 133 (2). 1991. 269-284. **1991**
FULL JOURNAL NAME: Cellular Immunology
CODEN: CLIMB
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/13 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07570489 BIOSIS NO.: 000091111043
THE EFFECT OF THE IMMUNOSUPPRESSANT FK-506 ON ALTERNATE PATHWAYS OF T CELL ACTIVATION
AUTHOR: BIERER B E; SCHREIBER S L; BURAKOFF S J
AUTHOR ADDRESS: ROOM 1610B, DANA-FARBER CANCER INST., 44 BINNEY ST., BOSTON, MASS. 02115, USA.
JOURNAL: EUR J IMMUNOL 21 (2). 1991. 439-446. **1991**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/14 (Item 14 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07563120 BIOSIS NO.: 000091103674
IMMOBILIZED ANTI-CD5 TOGETHER WITH PROLONGED ACTIVATION OF PROTEIN KINASE C INDUCE INTERLEUKIN 2-DEPENDENT T CELL GROWTH EVIDENCE FOR SIGNAL TRANSDUCTION THROUGH CD5
AUTHOR: VANDENBERGHE P; CEUPPENS J L
AUTHOR ADDRESS: LAB. CLIN. IMMUNOL., UNIV. HOSP. ST.-RAFAEL, KAPUCIJNENVOER 33, B-3000 LEUVEN, BELG.
JOURNAL: EUR J IMMUNOL 21 (2). 1991. 251-260. **1991**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA

RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/15 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07547515 BIOSIS NO.: 000091099593
EVIDENCE THAT GENISTEIN A PROTEIN-TYROSINE KINASE INHIBITOR INHIBITS CD-28 MONOCLONAL-ANTIBODY-STIMULATED HUMAN T CELL PROLIFERATION
AUTHOR: ATLURU S; ATLURU D
AUTHOR ADDRESS: 701 PARK AVE., R. K. D. P., MINNEAPOLIS, MINN. 55415.
JOURNAL: TRANSPLANTATION (BALTIMORE) 51 (2). 1991. 448-450. **1991**
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)
CODEN: TRPLA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/16 (Item 16 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07544244 BIOSIS NO.: 000091096322
THE CD28 LIGAND B7-BB1 PROVIDES COSTIMULATORY SIGNAL FOR ALLOACTIVATION OF CD4-POSITIVE T CELLS
AUTHOR: KOULOVA L; CLARK E A; SHU G; DUPONT B
AUTHOR ADDRESS: IMMUNOGENETICS LAB., BOX 41, MEMORIAL SLOAN-KETTERING CANCER CENT., 1275 YORK AVENUE, NEW YORK, N.Y. 10021.
JOURNAL: J EXP MED 173 (3). 1991. 759-762. **1991**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/17 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07544153 BIOSIS NO.: 000091096231
ACTIVATION OF PERIPHERAL CD8-POSITIVE T LYMPHOCYTES VIA CD28 PLUS CD2 EVIDENCE FOR IL-2 GENE TRANSCRIPTION MEDIATED BY CD28 ACTIVATION
AUTHOR: CARABASI M H; DISANTO J P; YANG S Y; DUPONT B
AUTHOR ADDRESS: MEMORIAL SLOAN KETTERING CANCER CENT., BOX 328, 1275 YORK AVE., NEW YORK, N.Y. 10021.
JOURNAL: TISSUE ANTIGENS 37 (1). 1991. 26-32. **1991**
FULL JOURNAL NAME: Tissue Antigens
CODEN: TSANA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/18 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07544016 BIOSIS NO.: 000091096094
BINDING OF THE B CELL ACTIVATION ANTIGEN B7 TO CD28 COSTIMULATES T CELL PROLIFERATION AND INTERLEUKIN 2 MESSENGER RNA ACCUMULATION
AUTHOR: LINSLEY P S; BRADY W; GROSMAIRE L; ARUFFO A; DAMLE N K; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN DIV., BRISTOL-MYERS-SQUIBB PHARMACEUTICAL RES.

INST., 3005 FIRST AVENUE, SEATTLE, WASH. 98121.
JOURNAL: J EXP MED 173 (3). 1991. 721-730. **1991**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/19 (Item 19 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07436905 BIOSIS NO.: 000091042894
CYCLOSPORIN A AND FK-506 IN-VITRO EFFECTS ON PROLIFERATION OF HUMAN T CELLS
AUTHOR: ATLURU S; WOLOSCHAK G E; MCVEY D S; GUDAPATY S; ATLURU D
AUTHOR ADDRESS: DEP. ANAT. PHYSIOL., VMS 228, KANS. STATE UNIV., MANHATTAN, KANS. 66506, USA.
JOURNAL: BIOCHEM ARCH 6 (4). 1990. 397-408. **1990**
FULL JOURNAL NAME: Biochemical Archives
CODEN: BIARE
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/20 (Item 20 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07417939 BIOSIS NO.: 000091023928
CD28 MOLECULE AS A RECEPTOR-LIKE FUNCTION FOR ACCESSORY SIGNALS IN CELL-MEDIATED AUGMENTATION OF IL-2 PRODUCTION
AUTHOR: KOHNO K; SHIBATA Y; MATSUO Y; MINOWADA J
AUTHOR ADDRESS: FUJISAKI CELL CENT., HAYASHIBARA BIOCHEM. LAB., INC., 675-1, FUJISAKI OKAYAMA, 702 JAPAN OKAYAMA, JPN.
JOURNAL: CELL IMMUNOL 131 (1). 1990. 1-10. **1990**
FULL JOURNAL NAME: Cellular Immunology
CODEN: CLIMB
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/21 (Item 21 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07379902 BIOSIS NO.: 000091006582
SIGNAL REQUIREMENTS FOR ACTIVATION OF LEUKEMIC T CELLS FROM A CHRONIC LYMPHOCYTIC LEUKEMIA T-CLL
AUTHOR: ZOCCHI M R; POGGI A; HELTAI S; VILLA A; INVERARDI L; VICARI A; SABBADINI M G; FERRARINI M
AUTHOR ADDRESS: LABORATORIO IMMUNOTERAPIA ADOTTIVA, INSTITUTO SCIENTIFICO SAN RAFFAELE, VIA OLGETTINA 60, 20132 MILAN, ITALY.
JOURNAL: CLIN EXP IMMUNOL 82 (1). 1990. 108-113. **1990**
FULL JOURNAL NAME: Clinical and Experimental Immunology
CODEN: CEXIA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/22 (Item 22 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07378256 BIOSIS NO.: 000091004936

STIMULATION OF CLONED HUMAN T LYMPHOCYTES VIA THE CD3 OR CD28 MOLECULES INDUCES ENHANCEMENT IN VASCULAR ENDOTHELIAL PERMEABILITY TO MACROMOLECULES WITH PARTICIPATION OF TYPE-1 AND TYPE-2 INTERCELLULAR ADHESION PATHWAYS
AUTHOR: DAMLE N K; DOYLE L V
AUTHOR ADDRESS: ONCOGEN CORP., 3005 FIRST AVE., SEATTLE, WASH. 98121.
JOURNAL: EUR J IMMUNOL 20 (9). 1990. 1995-2004. **1990**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/23 (Item 23 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07378179 BIOSIS NO.: 000091004859
DELINEATION OF THE MECHANISM OF INHIBITION OF HUMAN T CELL ACTIVATION BY PGE-2
AUTHOR: MINAKUCHI R; WACHOLTZ M C; DAVIS L S; LIPSKY P E
AUTHOR ADDRESS: RHEUMATIC DISEASES DIV., HAROLD C. SIMMONS ARTHRITIS RES. CENT., UNIV. OF TEXAS SOUTHWESTERN MED. CENT., DALLAS, TEXAS 75235-8884.
JOURNAL: J IMMUNOL 145 (8). 1990. 2616-2625. **1990**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/24 (Item 24 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07295839 BIOSIS NO.: 000090075726
T CELL ANTIGEN CD28 MEDIATES ADHESION WITH B CELLS BY INTERACTING WITH ACTIVATION ANTIGEN B7-BB-1
AUTHOR: LINSLEY P S; CLARK E A; LEDBETTER J A
AUTHOR ADDRESS: ONCOGEN, 3005 FIRST AVE., WASHINGTON 98121.
JOURNAL: PROC NATL ACAD SCI U S A 87 (13). 1990. 5031-5035. **1990**
FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the United States of America
CODEN: PNASA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/25 (Item 25 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07295810 BIOSIS NO.: 000090075697
HUMAN **SUPPRESSOR T CELL** CLONES LACK **CD28**
AUTHOR: LI S G; OTTENHOFF T H M; VAN DEN ELSEN P; KONING F; ZHANG L; MAK T; DE VRIES R R P
AUTHOR ADDRESS: DEP. OF IMMUNOHEAMATOL. AND BLOOD BANK, UNIV. HOSP., P.O. BOX 9600, NL-2300 RC LEIDEN, NETHERLANDS.
JOURNAL: EUR J IMMUNOL 20 (6). 1990. 1281-1288. **1990**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/26 (Item 26 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07220957 BIOSIS NO.: 000090000811
CD28 LIGATION IN T-CELL ACTIVATION EVIDENCE FOR TWO SIGNAL TRANSDUCTION PATHWAYS
AUTHOR: LEDBETTER J A; IMBODEN J B; SCHIEVEN G L; GROSMAIRE L S; RABINOVITCH P S; LINDSTEN T; THOMPSON C B; JUNE C H
AUTHOR ADDRESS: DEP. PATHOL., UNIV. WASHINGTON, SEATTLE, WA.
JOURNAL: BLOOD 75 (7). 1990. 1531-1539. **1990**
FULL JOURNAL NAME: Blood
CODEN: BLOOA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/27 (Item 27 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07159540 BIOSIS NO.: 000089026183
CARDIAC ALLOGRAFT SURVIVAL ACROSS MAJOR HISTOCOMPATIBILITY COMPLEX BARRIERS IN THE RHESUS MONKEY FOLLOWING T LYMPHOCYTE-DEPLETED AUTOLOGOUS MARROW TRANSPLANTATION IV. IMMUNE RECONSTITUTION
AUTHOR: MOSES R D; SHARROW S O; STEPHANY D A; ORR K S; GRESS R E
AUTHOR ADDRESS: EXP. IMMUNOL. BRANCH, NATL. INST. HEALTH, BUILD. 10, ROOM 4B17, BETHESDA, MD. 20892.
JOURNAL: TRANSPLANTATION (BALTIMORE) 48 (5). 1989. 774-781. **1989**
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)
CODEN: TRPLA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/28 (Item 28 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07114449 BIOSIS NO.: 000039051143
T-CELL ACTIVATION VIA THE **CD28** PATHWAY IS **BLOCKED** BY A SELECTIVE PROTEIN-TYROSINE KINASE **INHIBITOR**
AUTHOR: TREVILLYAN J; LU Y; BJONDAHL J; PHILLIPS C; ATLURU R
AUTHOR ADDRESS: VET. AFFAIRS MED. CENT., TEX. TECH UNIV. HEALTH SCI. CENT., AMARILLO, TEX. 79106.
JOURNAL: JOINT MEETING OF THE AMERICAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY, AND THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS, NEW ORLEANS, LOUISIANA, USA, JUNE 4-7, 1990. FASEB (FED AM SOC EXP BIOL) J 4 (7). 1990. A2200. **1990**
CODEN: FAJOE
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

3/3/29 (Item 29 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07016270 BIOSIS NO.: 000089108154
COMPARISON OF THE IMMUNOMODULATION OF PREDNISONE DEXAMETHASONE AND DEFLAZACORT ON T-CELL ACTIVATION PATHWAYS AND GAMMA INTERFERON PRODUCTION
AUTHOR: SCUDELETTI M; CIPRANDI G; PRONZATO C; PASSALACQUA G; IMBIMBO B; BAGNASCO M; GANONICA G W

AUTHOR ADDRESS: ALLERGY CENTRE MED. SEMEIOTICS R, DEP. INTERNAL MED., UNIV. GENOA, GENOA 16131, ITALY.
JOURNAL: INT J IMMUNOTHER 5 (2). 1989. 85-90. **1989**
FULL JOURNAL NAME: International Journal of Immunotherapy
CODEN: IJIME
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/30 (Item 30 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07013143 BIOSIS NO.: 000089105027
IMMUNOREGULATORY PROPERTIES OF T-CELL LINES DERIVED FROM THE SYSTEMIC AND INTRATHECAL COMPARTMENTS A PHENOTYPIC AND FUNCTIONAL STUDY
AUTHOR: FREEDMAN M S; LOERTSCHER R; CASHMAN N R; DUQUETTE P; BLAIN M; ANTEL J P
AUTHOR ADDRESS: MONTREAL NEUROL. INST., 3801 UNIVERSITY ST., MONTREAL, QUEBEC, CANADA H3A 2 B4.
JOURNAL: ANN NEUROL 27 (3). 1990. 258-265. **1990**
FULL JOURNAL NAME: Annals of Neurology
CODEN: ANNED
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/31 (Item 31 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

07013061 BIOSIS NO.: 000089104945
CD28 IS AN INDUCIBLE T CELL SURFACE ANTIGEN THAT TRANSDUCES A PROLIFERATIVE SIGNAL IN CD3-POSITIVE MATURE THYMOCYTES
AUTHOR: TURKA L A; LEDBETTER J A; LEE K; JUNE C H; THOMPSON C B
AUTHOR ADDRESS: MSRB-II, ROOM 1560, 1150 WEST MEDICAL CENTER DR., UNIV. MICH. MED. CENT., ANN ARBOR, MI 48109-0676.
JOURNAL: J IMMUNOL 144 (5). 1990. 1646-1653. **1990**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/32 (Item 32 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06992637 BIOSIS NO.: 000089093901
ABNORMAL T SUPPRESSOR CELL FUNCTION IN JUVENILE RHEUMATOID ARTHRITIS
AUTHOR: SILVERMAN E D; SOMMA C; KHAN M M; MELMON K L; ENGLEMAN E G
AUTHOR ADDRESS: DIV. IMMUNOLOGY/RHEUMATOLOGY, HOSP. SICK CHILDREN, 555 UNIVERSITY AVENUE, TORONTO, ONTARIO M5G 1X8, CANADA.
JOURNAL: ARTHRITIS RHEUM 33 (2). 1990. 205-211. **1990**
FULL JOURNAL NAME: Arthritis and Rheumatism
CODEN: ARHEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/33 (Item 33 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06953062 BIOSIS NO.: 000089075067
T LYMPHOCYTE ACTIVATION THROUGH THE C-28 PATHWAY IS INSENSITIVE TO INHIBITION BY THE IMMUNOSUPPRESSIVE DRUG FK-506
AUTHOR: KAY J E; BENZIE C R
AUTHOR ADDRESS: BIOCHEM. LAB., SCH. BIOL. SCI., UNIV. SUSSEX, BRIGHTON BN1 9QG, UK.
JOURNAL: IMMUNOL LETT 23 (2). 1989. 155-160. **1989**
FULL JOURNAL NAME: Immunology Letters
CODEN: IMLED
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/34 (Item 34 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06925938 BIOSIS NO.: 000089059331
DIFFERENCES IN SURFACE PHENOTYPE AND MECHANISM OF ACTION BETWEEN ALLOANTIGEN-SPECIFIC CD8-POSITIVE CYTOTOXIC AND SUPPRESSOR T CELL CLONES
AUTHOR: KOIDE J; ENGLEMAN E G
AUTHOR ADDRESS: STANFORD UNIV. MED. CENT., DEP. PATHOL., 800 WELCH RD., PALO ALTO, CALIF. 94304.
JOURNAL: J IMMUNOL 144 (1). 1990. 32-40. **1990**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/35 (Item 35 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06925892 BIOSIS NO.: 000089059285
INHIBITION OF FUNCTIONAL PROPERTIES OF TETANUS ANTIGEN-SPECIFIC T-CELL CLONES BY ENVELOPE GLYCOPROTEIN GP120 OF HUMAN IMMUNODEFICIENCY VIRUS
AUTHOR: CHIRMULE N; KALYANARAMAN V S; OYAIZU N; SLADE H B; PAHWA S
AUTHOR ADDRESS: DEP. PEDIATR., NORTH SHORE UNIV. HOSP., CORNELL UNIV. MED. COLL., 300 COMMUNITY DRIVE, MANHASSET, N.Y. 11030.
JOURNAL: BLOOD 75 (1). 1990. 152-159. **1990**
FULL JOURNAL NAME: Blood
CODEN: BLOOA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/36 (Item 36 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06904876 BIOSIS NO.: 000089048948
T LYMPHOCYTES AND THEIR CD4 SUBSET ARE DIRECT TARGETS FOR THE INHIBITORY EFFECT OF CALCITRIOL
AUTHOR: VANHAM G; CEUPPENS J L; BOUILLON R
AUTHOR ADDRESS: LEGENDO, ONDERWIJS NAVORSING, GASTHUISBERG, LEUVEN, BELGIUM.
JOURNAL: CELL IMMUNOL 124 (2). 1989. 320-333. **1989**
FULL JOURNAL NAME: Cellular Immunology
CODEN: CLIMB
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/37 (Item 37 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06810608 BIOSIS NO.: 000088120051
STIMULATION VIA THE CD3 AND CD28 MOLECULES INDUCES RESPONSIVENESS TO IL-4 IN CD4-POSITIVE CD29-POSITIVE CD45R-NEGATIVE MEMORY T LYMPHOCYTES
AUTHOR: DAMLE N K; DOYLE L V
AUTHOR ADDRESS: DEP. IMMUNOL., CETUS CORP., 1400 FIFTY-THIRD ST., EMERYVILLE, CALIF. 94608, USA.
JOURNAL: J IMMUNOL 143 (6). 1989. 1761-1767. **1989**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/38 (Item 38 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06810584 BIOSIS NO.: 000088120027
DIFFERENTIAL REGULATION OF ACTIVATION-ASSOCIATED RECEPTOR EXPRESSION ON CD4-POSITIVE AND CD8-POSITIVE T LYMPHOCYTES BY ALLOSENSITIZED SUPPRESSOR T CELLS
AUTHOR: LOERTSCHER R; STROM T B
AUTHOR ADDRESS: TRANSPLANT IMMUNOL. LAB., DEP. MED., MCGILL UNIV., MONTREAL, QUEBEC H3A 1A1, CANADA.
JOURNAL: TRANSPLANTATION (BALTIMORE) 48 (3). 1989. 472-478. **1989**
FULL JOURNAL NAME: TRANSPLANTATION (Baltimore)
CODEN: TRPLA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/39 (Item 39 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06756495 BIOSIS NO.: 000088065928
THE INFLUENCE OF CYCLOSPORIN A ON THE ALTERNATIVE PATHWAYS OF HUMAN T CELL ACTIVATION IN-VITRO
AUTHOR: BLOEMENA E; VAN OERS R H J; WEINREICH S; STILMA-MEINESZ A P; SCHELLEKENS P T A; VAN LIER R A W
AUTHOR ADDRESS: C/O PUBLICATION SECRETARIAT, CENT. LAB. NETH. RED CROSS BLOOD TRANSFUSION SERV., P.O. BOX 9406, 1006 AK AMSTERDAM, NETH.
JOURNAL: EUR J IMMUNOL 19 (5). 1989. 943-946. **1989**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/40 (Item 40 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06752985 BIOSIS NO.: 000088062416
HUMAN T CELL ACTIVATION DIFFERENTIAL RESPONSE TO ANTI-CD28 AS COMPARED TO ANTI-CD3 MONOCLONAL ANTIBODIES
AUTHOR: BJORNDAHL J M; SUNG S-S J; HANSEN J A; FU S M
AUTHOR ADDRESS: DIV. RHEUMATOL., BOX 412, DEP. INTERN. MED., UNIV. VA., SCH. MED., CHARLOTTESVILLE, VA. 22908.
JOURNAL: EUR J IMMUNOL 19 (5). 1989. 881-888. **1989**

FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/41 (Item 41 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06752921 BIOSIS NO.: 000088062352
EVIDENCE FOR THE INVOLVEMENT OF THREE DISTINCT SIGNALS IN THE INDUCTION OF IL-2 GENE EXPRESSION IN HUMAN T LYMPHOCYTES
AUTHOR: JUNE C H; LEDBETTER J A; LINDSTEN T; THOMPSON C B
AUTHOR ADDRESS: NAVAL MED. RES. INST., MS 44 BETHESDA, MD. 20814-5055.
JOURNAL: J IMMUNOL 143 (1). 1989. 153-161. **1989**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/42 (Item 42 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06740363 BIOSIS NO.: 000088049793
HUMAN IMMUNODEFICIENCY VIRUS INFECTION OF HELPER T CELL CLONES EARLY PROLIFERATIVE DEFECTS DESPITE INTACT ANTIGEN-SPECIFIC RECOGNITION AND INTERLEUKIN 4 SECRETION
AUTHOR: LAURENCE J; FRIEDMAN S M; CHARTASH E K; CROW M K; POSNETT D N
AUTHOR ADDRESS: DIV. HEMATOL.-ONCOL., NEW YORK HOSP.-CORNELL MED. CENT., 525 EAST 68TH ST., NEW YORK, N.Y. 10021.
JOURNAL: J CLIN INVEST 83 (6). 1989. 1843-1848. **1989**
FULL JOURNAL NAME: Journal of Clinical Investigation
CODEN: JCINA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/43 (Item 43 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06628702 BIOSIS NO.: 000087070864
SIGNALING THROUGH T LYMPHOCYTE SURFACE PROTEINS TCR-CD3 AND CD28 ACTIVATES THE HIV-1 LONG TERMINAL REPEAT
AUTHOR: TONG-STARKSEN S E; LUCIW P A; PETERLIN B M
AUTHOR ADDRESS: HHMI, RM. U-426, UCSF, SAN FRANCISCO, CALIF. 94143.
JOURNAL: J IMMUNOL 142 (2). 1989. 702-707. **1989**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/44 (Item 44 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06595826 BIOSIS NO.: 000087037988
CLONAL ANALYSIS OF FUNCTIONALLY DISTINCT HUMAN CD4-POSITIVE T CELLS SUBSETS
AUTHOR: ROTTEVEEL F T M; KOKKELINK I; VAN LIER R A W; KUENEN B; MEAGER A; MIEDEMA F; LUCAS C J

AUTHOR ADDRESS: CENT. LAB., NETH. RED CROSS BLOOD TRANSFUSION SERV., P.O. BOX 1006 AK AMSTERDAM, NETH.
JOURNAL: J EXP MED 168 (5). 1988. 1659-1674. **1988**
FULL JOURNAL NAME: Journal of Experimental Medicine
CODEN: JEMEA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/45 (Item 45 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06595741 BIOSIS NO.: 000087037903
CD45 REGULATES SIGNAL TRANSDUCTION AND LYMPHOCYTE ACTIVATION BY SPECIFIC ASSOCIATION WITH RECEPTOR MOLECULES ON T OR B CELLS
AUTHOR: LEDBETTER J A; TONKS N K; FISCHER E H; CLARK E A
AUTHOR ADDRESS: ONCOGEN CORP., 3005 FIRST AVE., SEATTLE, WASH. 98121.
JOURNAL: PROC NATL ACAD SCI U S A 85 (22). 1988. 8628-8632. **1988**
FULL JOURNAL NAME: Proceedings of the National Academy of Sciences of the United States of America
CODEN: PNASA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/46 (Item 46 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06411026 BIOSIS NO.: 000036114179
LACK OF ACCESSORY MOLECULE **CD28** ON MYCOBACTERIUM-LEPRAE INDUCED **SUPPRESSOR T CELL** LINES AND CLONES
AUTHOR: HAANEN J B A G; SHUGUANG L; V SCHOOTEN W C A; DE VRIES R R P
AUTHOR ADDRESS: DEP. IMMUNOHEMATOL., BUILD. 1, E3-Q, AZL RIJNSBURGERWEG 10, 2333 AA LEIDEN, NETH.
JOURNAL: 4TH INTERNATIONAL CONFERENCE ON HUMAN LEUCOCYTE DIFFERENTIATION ANTIGENS, VIENNA, AUSTRIA, FEBRUARY 21-25, 1989. TISSUE ANTIGENS 33 (2). 1989. 105. **1989**
CODEN: TSANA
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

3/3/47 (Item 47 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06268841 BIOSIS NO.: 000086103024
COOPERATION BETWEEN AN ANTI-T CELL ANTI-CD28 MONOCLONAL ANTIBODY AND MONOCYTE-PRODUCED IL-6 IN THE INDUCTION OF T CELL RESPONSIVENESS TO IL-2
AUTHOR: BAROJA M L; CEUPPENS J L; VAN DAMME J; BILLIAU A
AUTHOR ADDRESS: LAB. OF CLINICAL IMMUNOL., UNIV. HOSP., CAPUCIJNENVOER 33, 3000 LEUVEN, BELGIUM.
JOURNAL: J IMMUNOL 141 (5). 1988. 1502-1507. **1988**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/48 (Item 48 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06224916 BIOSIS NO.: 000086059098
TRIGGERING CD 28 MOLECULES SYNERGIZE WITH CD 2 T11.1 AND T11.2-MEDIATED T CELL ACTIVATION
AUTHOR: PIERRES A; LOPEZ M; CERDAN C; NUNES J; OLIVE D; MAWAS C
AUTHOR ADDRESS: INSERM U. 119, 27, BD LEI ROURE, F-13009 MARSEILLE, FR.
JOURNAL: EUR J IMMUNOL 18 (5). 1988. 685-690. **1988**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/49 (Item 49 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06214828 BIOSIS NO.: 000086049010
PHOSPHORYLATION OF T CELL MEMBRANE PROTEINS BY ACTIVATORS OF PROTEIN KINASE C
AUTHOR: CHATILA T A; GEHA R S
AUTHOR ADDRESS: IMMUNOL. PROGRAM, CHILDREN'S HOSP., 300 LONGWOOD AVE., BOSTON, MASS. 02115.
JOURNAL: J IMMUNOL 140 (12). 1988. 4308-4314. **1988**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/50 (Item 50 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06203839 BIOSIS NO.: 000086038021
A NOVEL PATHWAY OF HUMAN T LYMPHOCYTE ACTIVATION IDENTIFICATION BY A MONOCLONAL ANTIBODY GENERATED AGAINST A RHEUMATOID SYNOVIAL T CELL LINE
AUTHOR: HIGGS J B; ZELDES W; KOZARSKY K; SCHTEINGART M; KAN L; BOHLKE P; KRIEGER K; DAVIS W; FOX D A
AUTHOR ADDRESS: UNIV. MICH. MED. CENT., DIV. RHEUMATOL. RACKHAM ARTHRITIS RES. UNIT, DEP. INTERN. MED., ANN ARBOR, MI 48109, USA.
JOURNAL: J IMMUNOL 140 (11). 1988. 3758-3765. **1988**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/51 (Item 51 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06148412 BIOSIS NO.: 000085111564
DIFFERENTIAL REGULATORY SIGNALS DELIVERED BY ANTIBODY BINDING TO THE CD28 TP44 MOLECULE DURING THE ACTIVATION OF HUMAN T LYMPHOCYTES
AUTHOR: DAMLE N K; DOYLE L V; GROSMAIRE L S; LEDBETTER J A
AUTHOR ADDRESS: CETUS CORPORATION, 1400 FIFTY-THIRD ST., EMERYVILLE, CALIF. 94608.
JOURNAL: J IMMUNOL 140 (6). 1988. 1753-1761. **1988**
FULL JOURNAL NAME: Journal of Immunology
CODEN: JOIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/52 (Item 52 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06148260 BIOSIS NO.: 000085111412
SIGNALS INVOLVED IN T CELL ACTIVATION T CELL PROLIFERATION INDUCED THROUGH THE SYNERGISTIC ACTION OF ANTI-CD28 AND ANTI-CD2 MONOCLONAL ANTIBODIES
AUTHOR: VAN LIER R A W; BROUWER M; AARDEN L A
AUTHOR ADDRESS: C/O PUBLICATION SECRETARIAT, CENTRAL LAB. NETHERLANDS RED CROSS BLOOD TRANSFUSION SERV., P.O. BOX 9406, 1006 AK AMSTERDAM, NETHERLANDS.
JOURNAL: EUR J IMMUNOL 18 (1). 1988. 167-172. **1988**
FULL JOURNAL NAME: European Journal of Immunology
CODEN: EJIMA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/53 (Item 53 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

06074618 BIOSIS NO.: 000085037767
T-CELL PROLIFERATION INVOLVING THE CD28 PATHWAY IS ASSOCIATED WITH CYCLOSPORINE-RESISTANT INTERLEUKIN 2 GENE EXPRESSION
AUTHOR: JUNE C H; LEDBETTER J A; GILLESPIE M M; LINDSTEN T; THOMPSON C B
AUTHOR ADDRESS: NAVAL MED. RES. INST., BETHESDA, MD. 20814.
JOURNAL: MOL CELL BIOL 7 (12). 1987. 4472-4481. **1987**
FULL JOURNAL NAME: Molecular and Cellular Biology
CODEN: MCEBD
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

3/3/54 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

04718382 EMBASE No: 1991211736
Increased lymphocyte beta-adrenergic receptor density in progressive multiple sclerosis is specific for the CD8+, CD28- suppressor cell
Karaszewski J.W.; Reder A.T.; Anlar B.; Woo Chan Kim; Arnason B.G.W.
Department of Neurology, University of Chicago, BH Box 425, 5841 S. Maryland Avenue,Chicago, IL 60637 United States
Annals of Neurology (ANN. NEUROL.) (United States) 1991, 30/1 (42-47)
CODEN: ANNED ISSN: 0364-5134
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/55 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

04618099 EMBASE No: 1991112142
The CD28 ligand B7/BB1 provides costimulatory signal for alloactivation of CD4sup + T cells
Koulova L.; Clark E.A.; Shu G.; Dupont B.
Human Immunogenetics Lab., Memorial Sloan-Kettering, Cancer Center, 1275 York Avenue,New York, NY 10021 United States
Journal of Experimental Medicine (J. EXP. MED.) (United States) 1991, 173/3 (759-762)

CODEN: JEMEA ISSN: 0022-1007
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/56 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2002 Elsevier Science B.V. All rts. reserv.

04563499 EMBASE No: 1991057542
Activation of peripheral CD8sup + T lymphocytes via CD28 plus CD2: Evidence for IL-2 gene transcription mediated by CD28 activation
Carabasi M.H.; DiSanto J.P.; Yang S.Y.; Dupont B.
Sloan Kettering Cancer Center, Box 328, 1275 York Avenue,New York, NY 10021 United States
Tissue Antigens (TISSUE ANTIGENS) (Denmark) 1991, 37/1 (26-32)
CODEN: TSANA ISSN: 0001-2815
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/57 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2002 Elsevier Science B.V. All rts. reserv.

04492389 EMBASE No: 1990380498
Delineation of the mechanism of inhibition of human T cell activation by PGEinf 2
Minakuchi R.; Wacholtz M.C.; Davis L.S.; Lipsky P.E.
Rheumatic Diseases Division, H.C. Simmons Arth. Res. Center, Univ./Texas SW Medical Center,Dallas, TX 75235-8884 United States
Journal of Immunology (J. IMMUNOL.) (United States) 1990, 145/8 (2616-2625)
CODEN: JOIMA ISSN: 0022-1767
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/58 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2002 Elsevier Science B.V. All rts. reserv.

04323894 EMBASE No: 1990206450
Human **suppressor T cell** clones lack **CD28**
Il S.G.; Ottenhoff T.H.M.; Van Den Elsen P.; Koning F.; Zhang L.; Mak T.; De Vries R.R.P.
Dept. of Immunohaematology, University Hospital, P.O. Box 9600,NL-2300 RC Leiden Netherlands
European Journal of Immunology (EUR. J. IMMUNOL.) (Germany) 1990, 20/6 (1281-1288)
CODEN: EJIMA ISSN: 0014-2980
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/59 (Item 6 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2002 Elsevier Science B.V. All rts. reserv.

04211794 EMBASE No: 1990094336
CD28 is an inducible T cell surface antigen that transduces a proliferative signal in CD3sup + mature thymocytes
Turka L.A.; Ledbetter J.A.; Lee K.; June C.H.; Thompson C.B.
Department of Medicine, University of Michigan, Ann Arbor, MI United

States
Journal of Immunology (J. IMMUNOL.) (United States) 1990, 144/5 (1646-1653)
CODEN: JOIMA ISSN: 0022-1767
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/60 (Item 7 from file: 73)
DIALOG(R)File 73:EMBASE

04140743 EMBASE No: 1990023285
T lymphocyte activation through the C28 pathway is insensitive to inhibition by the immunosuppressive drug FK-506
Kay J.E.; Benzie C.R.
Biochemistry Laboratory, School of Biological Sciences, University of Sussex,Brighton BN1 9QG United Kingdom
Immunology Letters (IMMUNOL. LETT.) (Netherlands) 1989, 23/2 (155-160)
CODEN: IMLED ISSN: 0165-2478
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/61 (Item 8 from file: 73)
DIALOG(R)File 73:EMBASE

04107600 EMBASE No: 1989276646
Antigen-specific suppressor T lymphocytes in man
Damle N.K.; Engleman E.G.
Stanford University School of Medicine, Stanford, CA 94305 United States
Clinical Immunology and Immunopathology (CLIN. IMMUNOL. IMMUNOPATHOL.) (United States) 1989, 53/2 II (S17-S24)
CODEN: CLIIA ISSN: 0090-1229
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/62 (Item 9 from file: 73)
DIALOG(R)File 73:EMBASE

04072185 EMBASE No: 1989241227
Stimulation via the CD3 and CD28 molecules induces responsiveness to IL-4 in CD4sup +CD29sup +CD45Rsup - memory T lymphocytes
Damle N.K.; Doyle L.V.
Department of Immunology, CETUS Corporation, Emeryville, CA 94608 United States
Journal of Immunology (J. IMMUNOL.) (United States) 1989, 143/6 (1761-1767)
CODEN: JOIMA ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/63 (Item 10 from file: 73)
DIALOG(R)File 73:EMBASE

04063680 EMBASE No: 1989232722
I-J and mechanism of immunosuppression
Nakayama T.; Asano Y.; Tada T.
Department of Immunology, Faculty of Medicine, University of Tokyo, Tokyo

Japan
Immunology (IMMUNOLOGY) (United Kingdom) 1989, -/SUPPL. 2 (16-19)
CODEN: IMMUA ISSN: 0019-2805
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/64 (Item 11 from file: 73)
DIALOG(R)File 73:EMBASE

03979898 EMBASE No: 1989148894
Human immunodeficiency virus infection of helper t celkl clones. Early proliferative defects despite intact antigen-specific recognition and interleukin 4 secretion
Laurence J.; Friedman S.M.; Chartash E.K.; Crow M.K.; Posnett D.N.
Laboratory for Acquired Immunodeficiency Syndrome, Virus Research Division of Hematology-Oncology, New York Hospital-Cornell Medical Center, New York, NY 10021 United States
Journal of Clinical Investigation (J. CLIN. INVEST.) (United States) 1989, 83/6 (1843-1848)
CODEN: JCINA ISSN: 0021-9738
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/65 (Item 12 from file: 73)
DIALOG(R)File 73:EMBASE

03854300 EMBASE No: 1989023255
Clonal analysis of functionally distinct human CD4sup + T cell subsets
Rotteveel F.T.M.; Kokkelink I.; Van Lier R.A.W.; Kuenen B.; Meager A.; Miedema F.; Lucas C.J.
Central Laboratory of the Netherlands Red Cross Blood Transfusion Service, University of Amsterdam, 1006 AK Amsterdam Netherlands
Journal of Experimental Medicine (J. EXP. MED.) (United States) 1988, 168/5 (1659-1673)
CODEN: JEMEA ISSN: 0022-1007
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

3/3/66 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06987119 91300769 PMID: 1649028
Phenotypic and functional characteristics of activated CD8+ cells: a CD11b-CD28- subset mediates noncytolytic functional suppression.
Freedman M S; Ruijs T C; Blain M; Antel J P
Department of Neurology & Neurosurgery, Montreal Neurological Institute, McGill University, Quebec, Canada.
Clinical immunology and immunopathology (UNITED STATES) Aug **1991**, 60 (2) p254-67, ISSN 0090-1229 Journal Code: 0356637
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/67 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06977978 91289413 PMID: 1712132

Inhibition of human T-cell activation by FK 506, rapamycin, and cyclosporine A.
Sigal N H; Lin C S; Siekierka J J
Department of Immunology Research, Merck, Sharp & Dohme Research Laboratories, Rahway, New Jersey.
Transplantation proceedings (UNITED STATES) Apr **1991**, 23 (2 Suppl 2) p1-5, ISSN 0041-1345 Journal Code: 0243532
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/68 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06805338 91111762 PMID: 1846483
Cyclosporine inhibits T-cell activation at two distinct levels: role of the CD 28 activation pathway.
Hess A D; Bright E C
Bone Marrow Transplant Unit, Johns Hopkins University, Baltimore, Maryland 21205.
Transplantation proceedings (UNITED STATES) Feb **1991**, 23 (1 Pt 2) p961-6, ISSN 0041-1345 Journal Code: 0243532
Contract/Grant No.: CA15396; CA; NCI
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/69 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06425766 90124324 PMID: 2153452
Enhancement by interleukin 4 of interleukin 2- or antibody-induced proliferation of lymphocytes from interleukin 2-treated cancer patients.
Treisman J; Higuchi C M; Thompson J A; Gillis S; Lindgren C G; Kern D E; Ridell S R; Greenberg P D; Fefer A
Department of Medicine, University of Washington School of Medicine, Seattle 98195.
Cancer research (UNITED STATES) Feb 15 **1990**, 50 (4) p1160-4, ISSN 0008-5472 Journal Code: 2984705R
Contract/Grant No.: CA 09515; CA; NCI; NO1-CM47668; CM; NCI
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/70 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06365666 90062017 PMID: 2479633
I-J as a second T cell receptor for self--molecular polymorphism and the role in suppressive signal transduction.
Tada T; Nakayama T; Asano Y; Kishimoto H; Sano K
Department of Immunology, Faculty of Medicine, University of Tokyo, Japan.
Princess Takamatsu symposia (UNITED STATES) **1988**, 19 p227-35, Journal Code: 9301172
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM

Record type: Completed

3/3/71 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06293373 89381305 PMID: 2570801
Stimulation via the CD3 and CD28 molecules induces responsiveness to IL-4 in CD4+CD29+CD45R- memory T lymphocytes.
Damle N K; Doyle L V
Department of Immunology, CETUS Corporation, Emeryville, CA 94608.
Journal of immunology (Baltimore, Md. : 1950) (UNITED STATES) Sep 15 **1989**, 143 (6) p1761-7, ISSN 0022-1767 Journal Code: 2985117R
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/72 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06288192 89374534 PMID: 2550020
Two distinct mechanisms of interleukin-2 gene expression in human T lymphocytes.
June C H; Jackson K M; Ledbetter J A; Leiden J M; Lindsten T; Thompson C B
Naval Medical Research Institute, Bethesda, MD 20814.
Journal of autoimmunity (ENGLAND) Jun **1989**, 2 Suppl p55-65, ISSN 0896-8411 Journal Code: 8812164
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/73 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06215986 89313341 PMID: 3075679
Comparative aspects of T cell activation in vivo following stimulation with anti-CD3 MAB, allogeneic cells and Trypanosoma cruzi.
Pereira G M; Furtado G de C; Yokoyama W M; Kipnis T L; Shevach E M
Cellular Immunology Section, LI-NIAID, Bethesda, MD.
Memorias do Instituto Oswaldo Cruz (BRAZIL) Nov **1988**, 83 Suppl 1 p284-90, ISSN 0074-0276 Journal Code: 7502619
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/74 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

05928984 89010540 PMID: 3049912
A novel activation pathway for mature thymocytes. Costimulation of CD2 (T,p50) and CD28 (T,p44) induces autocrine interleukin 2/interleukin 2 receptor-mediated cell proliferation.
Yang S Y; Denning S M; Mizuno S; Dupont B; Haynes B F
Laboratories of Human and Biochemical Immunogenetics, Sloan-Kettering Institute for Cancer Research, New York, New York 10021.
Journal of experimental medicine (UNITED STATES) Oct 1 **1988**, 168 (4) p1457-68, ISSN 0022-1007 Journal Code: 2985109R

Contract/Grant No.: CA-22507; CA; NCI; CA-28936; CA; NCI; PO30 CA-08748; CA; NCI; +
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

3/3/75 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

113224572 CA: 113(25)224572c PATENT
Immunotherapy involving CD28 stimulation of T-cell lymphokines
INVENTOR(AUTHOR): Thompson, Craig B.; June, Carl H.; Ledbetter, Jeffrey A.; Lindsten, Tullia
LOCATION: USA
ASSIGNEE: University of Michigan; Bristol-Myers Squibb Co.
PATENT: PCT International ; WO 9005541 A1 DATE: 900531
APPLICATION: WO 89US5304 (891122) *US 275433 (881123)
PAGES: 32 pp. CODEN: PIXXD2 LANGUAGE: English CLASS: A61K-039/395A
DESIGNATED COUNTRIES: JP DESIGNATED REGIONAL: AT; BE; CH; DE; ES; FR; GB ; IT; LU; NL; SE
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t s3/7/72,73

3/7/72 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06288192 89374534 PMID: 2550020
Two distinct mechanisms of interleukin-2 gene expression in human T lymphocytes.
June C H; Jackson K M; Ledbetter J A; Leiden J M; Lindsten T; Thompson C B
Naval Medical Research Institute, Bethesda, MD 20814.
Journal of autoimmunity (ENGLAND) Jun **1989**, 2 Suppl p55-65, ISSN 0896-8411 Journal Code: 8812164
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Interleukin-2 (IL-2) gene regulation was investigated in primary cultures of highly purified human peripheral blood CD28+ T cells. Two discrete mechanisms for induction of T-cell proliferation could be distinguished by examining cell cycle progression and the expression of the IL-2 gene. Stimulation of cells by CD3 MoAb induced only transiently expressed, small amounts of IL-2 mRNA that was completely **suppressed** by cyclosporine. Costimulation of T cells with CD3 MoAb and either **CD28** MoAb or PMA, but not calcium ionophore, induced a 50-100-fold increased in IL-2 gene expression and secretion. High levels of IL-2 gene expression could also be achieved by stimulation with calcium ionophore and PMA or **CD28** MoAb and PMA, but not by **CD28** MoAb plus calcium ionophore. IL-2 gene expression and T-cell proliferation induced by CD3 MoAb plus PMA or calcium ionophore plus PMA were completely **suppressible** by cyclosporine. In contrast, IL-2 gene expression and **T-cell** proliferation induced by **CD28** MoAb plus PMA were unaffected by cyclosporine. The **CD28** signal was dependent on new protein synthesis. Nuclear run-on transcription assays showed that anti-**CD28** did not affect lymphokine transcription. A major effect of **CD28** stimulation on mRNA stability was shown by studies using actinomycin D; CD28 stimulation substantially increased the half-life of IL-2 and TNF-alpha mRNA. The effects of anti-CD28 stimulation were specific for growth factors, and thus differ from previously described effects of cycloheximide on mRNA stability. These studies suggest the existence of two biochemical pathways for the induction of IL-2 production, one that occurs at the transcriptional level and is mediated by intracellular calcium release and protein kinase C and is cyclosporine-sensitive, and one that acts post-transcriptionally, is mediated by CD28 stimulation, and is cyclosporine-resistant.
Record Date Created: 19891017

3/7/73 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

06215986 89313341 PMID: 3075679
Comparative aspects of T cell activation in vivo following stimulation with anti-CD3 MAB, allogeneic cells and Trypanosoma cruzi.
Pereira G M; Furtado G de C; Yokoyama W M; Kipnis T L; Shevach E M
Cellular Immunology Section, LI-NIAID, Bethesda, MD.
Memorias do Instituto Oswaldo Cruz (BRAZIL) Nov **1988**, 83 Suppl 1 p284-90, ISSN 0074-0276 Journal Code: 7502619
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
The in vivo administration of the immunosuppressive drug, Cyclosporin A (CSA), has allowed us to define IL-2 dependent and IL-2 independent pathways of T cell activation in vivo. Thus, CSA inhibited T cell

activation and the production of IL-2 mRNA in the draining lymph node (LN) population following footpad injection of anti-CD3 mAb. In contrast, even though CSA completely inhibited the induction of IL-2 mRNA in the draining LN following the injection of allogeneic cells, T cell activation proceeded normally. In the present study, we have analyzed the effects of CSA on the T cell activation induced in vivo by T. cruzi. BALB/c and C57BL/6 mice were injected subcutaneously in the footpad with irradiated, cultured T. cruzi trypomastigotes (CMTs, clone sylvio-X10/4). CSA was delivered to the mice via an osmotic pump, Alzet 2001 at a concentration of 35mg/Kg/day. The injection of CMTs resulted in a dose dependent activation of the draining LN population including an increase in the number of cells, an increase in cell size, induction of expression of the IL-2 receptor and other **T cell** activation antigens (Ly-6, **CD28**), induction of responsiveness to IL-2, and a vigorous proliferative response when the freshly explanted node was cultured for 18 h in vitro in the presence of 3H-TdR. CSA markedly **inhibited** all of these parameters of **T cell** activation. Thus, the early T cell activation response observed after injection of irradiated T. cruzi CMTs appears to be mediated by an IL-2 dependent, CSA sensitive T cell activation pathway.

Record Date Created: 19890825

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